

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A line driver, comprising:

- a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;
- a first resistor coupled to the inverting input terminal;
- a second resistor coupled to the non-inverting input terminal; and
- a resistive feedback network, having a plurality of resistors in symmetric configuration to couple to the inverting output terminal, the non-inverting output terminal, the inverting input terminal, and the non-inverting input terminal to form a feedback network.

2. (Original) The line driver of claim 1, wherein the resistive feedback network further includes a third resistor, a fourth resistor, a fifth resistor, a sixth resistor, a first match resistor, and a second match resistor, wherein a first terminal of the third resistor is coupled to the non-inverting output terminal and a first terminal of the first match resistor, a second terminal of the third resistor is coupled to the inverting input terminal and a first terminal of the sixth resistor, a first terminal of the fourth resistor is coupled to the inverting output terminal and a first terminal of the second match resistor, a second terminal of the fourth resistor is coupled to the non-inverting input terminal and a first terminal of the fifth resistor, a second terminal of the fifth resistor is coupled to a second terminal of the first match resistor, and a second terminal of the sixth resistor is coupled to a second terminal of the second match resistor.

3. (Original) The line driver of claim 2, wherein the resistive feedback network further includes further comprising:

a seventh resistor and an eighth resistor, wherein a first terminal of the seventh resistor is coupled to the inverting input terminal, a second terminal of the seventh resistor is coupled to the second terminal of the fifth resistor, a first terminal of the eighth resistor is coupled to the non-inverting input terminal, and a second terminal of the eighth resistor is coupled to the second terminal of the sixth resistor.

4. (Original) The line driver of claim 2, further comprising:

a ninth resistor and a tenth resistor, wherein a first terminal of the ninth resistor is coupled to the non-inverting input terminal, a second terminal of the ninth resistor is coupled to the first terminal of the third resistor, a first terminal of the tenth resistor is coupled to the inverting input terminal, and a second terminal of the tenth resistor is coupled to the first terminal of the fourth resistor.

5. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor unit coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor unit coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes:

a ~~second-first~~ resistor unit ~~coupled including a first resistor connected to the first~~ impedance matching resistor ~~unit~~ and the inverting input terminal; and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal;

a ~~third-second~~ resistor unit ~~coupled including a third resistor connected to the non-inverting output terminal and the inverting input terminal; and a fourth resistor unit coupled to the impedance matching resistor unit and the inverting input terminal; and a fifth resistor unit coupled connected to the inverting output terminal and the inverting non-inverting input terminal;~~

wherein each of the first resistor unit, the second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration

a third resistor unit including a fifth resistor connected to the second impedance matching resistor unit and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor unit and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

6. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor ~~unit~~ coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor unit coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes only three of the following four resistor units[[:]] comprising:

~~a second-first resistor unit coupled to the impedance matching-including a first resistor unit and the inverting input terminal;~~

~~a third resistor unit coupled-connected to the non-impedance-first impedance matching resistor and the inverting output input terminal and the inverting input terminal;~~

~~a fourth-second resistor unit coupled-connected to the second impedance matching resistor unit and the inverting-non-inverting input terminal; and~~

~~a fifth-second resistor unit coupled-including a third resistor connected to the non-inverting output terminal and the inverting input terminal[[:]]~~

~~wherein each of and a fourth resistor connected to the first resistor unit, the second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration inverting output terminal and the non-inverting input terminal;~~

~~a third resistor unit including a fifth resistor connected to the second impedance matching resistor unit and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor unit and the non-inverting input terminal; and~~

~~a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.~~

7. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first ~~input~~ resistor ~~unit~~ coupled to the inverting input terminal;

a ~~second input resistor coupled to the non-inverting input terminal;~~

a ~~first impedance matching resistor unit coupled to the non-inverting output terminal;~~

a ~~second impedance matching resistor~~ coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes ~~only two of the following resistor units:~~

~~a second first resistor unit coupled including a first resistor connected to the first impedance matching resistor unit and the inverting input terminal; and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal, and one of the following three resistor units comprising:~~

~~a second resistor unit including a third resistor unit coupled connected to the non-inverting output terminal and the inverting input terminal;~~

~~a fourth resistor unit coupled to the impedance matching resistor unit and the inverting input terminal; and~~

~~— a fifth resistor unit coupled to the inverting output terminal and the inverting input terminal[[:]]~~

~~wherein each of and a fourth resistor connected to the first resistor unit, inverting output terminal and the second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration non-inverting input terminal;~~

a third resistor unit including a fifth resistor connected to the second impedance matching resistor unit and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor unit and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

8. (New) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes:

a first resistor unit including a first resistor connected to the non-inverting output terminal and the inverting input terminal and a second resistor connected to the inverting output terminal and the non-inverting input terminal; and

a second resistor unit including a third resistor connected to the inverting output terminal and the inverting input terminal and a fourth resistor connected to the non-inverting output terminal and the non-inverting input terminal.